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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/518,287

11/22/2005

Micko Sakai

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EXAMINER

AUSTIN, AARON

ART UNIT

PAPER NUMBER

1775

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05/31/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/518,287	Applicant(s) SAKAI ET AL.	
	Examiner Aaron S. Austin	Art Unit 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 1-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/17/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

Claims 1-20 are objected to because of the following informalities: the elements presented by the claims are not separated by line indentation for clarity. Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. 37 CFR 1.75(i), MPEP 608.01(m).

Claim 2 is objected to because of the following informalities: line 4 recites "an a molded product such as a tile" rather than "and a molded product such as a tile" or "or a molded product such as a tile". Appropriate correction is required.

Claim 5 is objected to because of the following informalities: lines 1-2 recite "according to claim 1 4" rather than "according to claim 1". Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the inclusion of "sparkling points which change with irradiation manner and movement of natural light or artificial light" in line 9 is unclear and therefore indefinite. First, it is unclear as to what physical structure forms the sparkling points.

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Are they formed by either the fine particle component or the finer particle component or by an entirely different component? Second, it is unclear as to how the "manner and movement" of light is affected by irradiation. What form of irradiation causes this change? Moreover, what change takes place such that light is affected as claimed?

Regarding claim 2, the phrase "and the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Regarding claim 2, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. Description of examples or preferences is properly set forth in the specification rather than the claims. If stated in the claims, examples and preferences may lead to confusion over the intended scope of a claim. See MPEP § 2173.05(d). Moreover, if upon review of a claim in its entirety, the examiner concludes that a rejection under 35 U.S.C. 112, second paragraph, is appropriate, such a rejection should be made and an analysis as to why the phrase(s) used in the claim is "vague and indefinite" should be included in the Office action. See MPEP § 2173.02. In the present case, it is unclear as to the relationship between the listed possibilities that follow the "such as" statement that limits the claim interpretation. For example, the recitation of "screening sands such as a river sand and a sea sand" presumably includes reference to river sand and sea sand to further define the screening sands element. However, it is unclear as to what

elements of river sand and sea sand limit and define the screening sand element. Must the screening sand be derived from a water body (e.g., a river or the sea)?

Regarding claim 4, the phrase "sintered into a surface of particle of the transparent inorganic fine particle component or covered thereon together with a resin" is ambiguous. Is the phrase "sintered into a surface of particle" intended to be "sintered into a surface of each particle"? Further, is the alternative expression "or covered thereon together with a resin" intended to mean the material may cover the transparent inorganic fine particle component as an alternative to sintering? Is the resin present only if covering of the component with the material or is the resin present when sintered as well?

Claim 8 recites the limitation "the surface layer thereof" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the molded material" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "the surface layer thereof" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "the surface layer thereof" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "the surface layer thereof" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "the surface layer thereof" in line 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai (US Patent No. 6,309,562).

Sakai teaches an artificial stone wall material comprising a transparent inorganic aggregate and a resin as main components (column 2, lines 18-30). The transparent aggregate consists of small (fine) particles in the size of about 0.21-4 mm (column 4, line 12) and fine (finer) particles having a particle size of 44-99 microns (column 4, line 47). The transparent aggregate comprises 82-93 wt. % of the product (column 2, line 21), with the ratio of small particle to fine particle being 0.5:1 to 5:1 (column 3, line 43). The small particle comprises 50 to 100 wt.% of a transparent inorganic small particle (column 4, lines 54-56), therefore 5 wt% or more of the product comprises a transparent inorganic fine particle. The product is a molded and shaped product (column 8, lines 21-32). The stone includes a light storing function and light emitting function akin to the claimed sparkling points (column 4, lines 48 to column 5, line 15).

Sakai further teaches a roughened surface formed by using a water jet or organic solvent (column 8, lines 30-32; column 8, line 64 to column 9, line 6; column 9, line 28). Sakai does not teach the roughening process as producing a concavo-convex surface having a height of 1 mm to 100 mm as claimed.

However, as Applicant teaches the concave and convex surface is formed by water jet and as Sakai teaches roughening using water jet, the product as taught by Sakai has a concavo-convex surface as like materials are used in a like manner.

"[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In this case, Sakai does not specify the workable ranges for the depth of the roughened surface, but they do describe the general conditions of the claim, namely water jet treatment of an artificial stone surface to form a product that resembles a natural stone. It would not be inventive to discover the workable ranges for the height between the concavity and convexity by routine experimentation of the invention taught by Sakai to produce a suitable imitation of natural rock.

Regarding claim 2, both the fine particle and finer particle components may be composed of a naturally occurring rock, etc., including materials having achromatic transparency or chromatic transparency (column 3, lines 6-24).

Regarding claims 3, 7 and 12, the finer particle may include a luminescent or fluorescent component (column 4, line 45).

Regarding claim 4, the luminescent or fluorescent component is present in the surface of a of the transparent inorganic fine particle component together with a resin (column 9, lines 21-column 10, line 15).

Regarding claims 1-10 and 12-20, with emphasis on claims 1, 2, 4, 5, 9, 10, and 13-15, the claims contain product by process language. The above arguments

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establish a rationale tending to show the claimed product is the same as what is taught by the prior art. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 227 USPQ 964,966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113.

Regarding claim 6, the inorganic fine component may be transparent (column 3, lines 6-15; column 4, lines 54-56).

Regarding claims 8 and 17-20, the artificial stone is suitable for use as a stone wall and thus will have a surface layer of the artificial stone.

Regarding claim 9, the language used is product by process language as noted above. Further, Sakai teaches a roughened surface formed by using a water jet or organic solvent (column 8, lines 30-32; column 8, line 64 to column 9, line 6; column 9, line 28). The transparent inorganic fine particle component is exposed on the surface.



Claims 1-10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai (US Patent No. 6,309,562) in view of Yamanashi et al. (US 2003/0087074).

Sakai teaches an artificial stone wall material as described above.

Sakai does not teach the roughening process as producing a concavo-convex surface having a height of 1 mm to 100 mm as claimed.

In addition to the argument set forth above, Yamanashi et al. teach an artificial stone having luminescence performance wherein water machining produces a concave groove depth of 0.02 to 1.0 mm that varies by composition (paragraphs [155] and [181]). One of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by Yamanashi et al. overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai (US Patent No. 6,309,562) in view of Yamanashi et al. (US 2003/0087074), and further in view of JP 4-7458.

Sakai in view of Yamanashi et al. teaches an artificial stone wall material as described above.

Neither of the cited references appears to teach a metal fitting molded into the rear surface or a lateral side of the wall material.

JP 4-7458 teaches an architectural finishing material wherein a trigger metal material is embedded in the rear surface of the finishing material body (claim 1). Therefore, as JP 4-7458 clearly teaches inclusion of a metal fitting in an architectural finishing material provides the advantage of a means for attachment to an installing architecture (English translation: page 69, lines 3-7), it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include a metal fitting for attachment to a wall surface in the artificial stone of Sakai in view of Yamanashi et al. Thus the claimed invention as a whole is *prima facie* obvious over the combined teachings of the prior art.

Claims 1-10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-292595.

JP 11-292595 teaches an artificial stone wall material comprising a transparent inorganic aggregate and a resin as main components. The transparent aggregate consists of small (fine) particles in the size of about 0.21-4 mm and fine (finer) particles

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having a particle size of less than 149 microns. 5 wt% or more of the product comprises a transparent inorganic fine particle. The product is a molded and shaped product. The stone includes a light storing function and light emitting function akin to the claimed sparkling points.

JP 11-292595 further teaches a roughened surface formed by using a water jet or organic solvent. JP 11-292595 does not teach the roughening process as producing a concavo-convex surface having a height of 1 mm to 100 mm as claimed.

However, as Applicant teaches the concave and convex surface is formed by water jet and as JP 11-292595 teaches roughening using water jet, the product as taught by JP 11-292595 has a concavo-convex surface as like materials are used in a like manner. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In this case, WO '370 does not specify the workable ranges for the depth of the roughened surface, but they do describe the general conditions of the claim, namely water jet treatment of an artificial stone surface to form a product that resembles a natural stone. It would not be inventive to discover the workable ranges for the height between the concavity and convexity by routine experimentation of the invention taught by JP 11-292595 to produce a suitable imitation of natural rock.

Regarding claim 2, both the fine particle and finer particle components may be composed of a naturally occurring rock, etc., including materials having achromatic transparency or chromatic transparency.

Regarding claims 3, 7 and 12, the finer particle may include a luminescent or fluorescent component.

Regarding claim 4, the luminescent or fluorescent component is present in the surface of a of the transparent inorganic fine particle component together with a resin.

Regarding claims 1-10 and 12-20, with emphasis on claims 1, 2, 4, 5, 9, 10, and 13-15, the claims contain product by process language. The above arguments establish a rationale tending to show the claimed product is the same as what is taught by the prior art. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964,966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113.

Regarding claim 6, the inorganic fine component may be transparent.

Regarding claims 8 and 17-20, the artificial stone is suitable for use as a front face of a stone wall (paragraph [0037]).

Regarding claim 9, the language used is product by process language as noted above. Further, JP 11-292595 teaches a roughened surface formed by using a water jet or organic solvent. The transparent inorganic fine particle component is exposed on the surface.

Claims 1-10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-292595 in view of Yamanashi et al. (US 2003/0087074).

JP 11-292595 teaches an artificial stone wall material as described above.

JP 11-292595 does not teach the roughening process as producing a concavo-convex surface having a height of 1 mm to 100 mm as claimed.

In addition to the argument set forth above, Yamanashi et al. teach an artificial stone having luminescence performance wherein water machining produces a concave groove depth of 0.02 to 1.0 mm that varies by composition (paragraphs [155] and [181]). One of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by Yamanashi et al. overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

"The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of

percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-292595 in view of Yamanashi et al. (US 2003/0087074), and further in view of JP 4-7458.

JP 11-292595 in view of Yamanashi et al. teaches an artificial stone wall material as described above.

Neither of the cited references appears to teach a metal fitting molded into the rear surface or a lateral side of the wall material.

JP 4-7458 teaches an architectural finishing material wherein a trigger metal material is embedded in the rear surface of the finishing material body (claim 1). Therefore, as JP 4-7458 clearly teaches inclusion of a metal fitting in an architectural finishing material provides the advantage of a means for attachment to an installing architecture (English translation: page 69, lines 3-7), it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include a metal fitting for attachment to a wall surface in the artificial stone of JP 11-292595 in view of Yamanashi et al. Thus the claimed invention as a whole is *prima facie* obvious over the combined teachings of the prior art.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

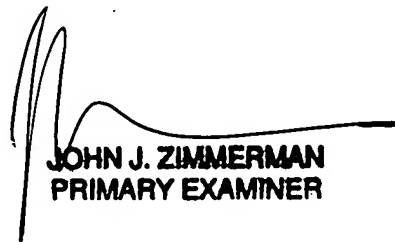
US Patent No. 6,146,548 to Sakai teaches a noctilucent or fluorescent artificial stone.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron S. Austin whose telephone number is (571) 272-8935. The examiner can normally be reached on Monday-Friday: 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASA



**JOHN J. ZIMMERMAN**  
**PRIMARY EXAMINER**